

## REMARKS/ARGUMENTS

Reconsideration of this patent application is respectfully requested in view of the foregoing amendments, and the following remarks. Claims 2, 3, 5 and 7-10 are in the application. Claims 8 and 10 have been amended. No new matter has been added.

The Examiner rejected claims 2, 3, 5, and 7-10 under 35 USC §112, stating that the term "soldering joint" was indefinite, as there is only one joint. Applicant has amended the claims to recite "soldering connection" and "welding connection" to describe the two parts of the seam that is created to bridge the butt joint. This seam is shown in the drawings, in particular FIG. 2, where the soldering connection is pointed out as distance "b". The remainder of the seam is the welding connection.

The Examiner rejected claims 2, 8, and 9 under 35 USC §102 (b) as being anticipated by Bertels. The Examiner rejected under 35 USC §103(a) claim 3 as being unpatentable over Bertels in view of Persson, claim 5 as being unpatentable over Bertels in view of Kunz et al., and claims 7 and 10 as being unpatentable over Bertels in view of Frings et al. Applicants respectfully

traverse.

According to Fig. 6 and 7 of Bertels, the distance  $a$  between the steel sheet and the sheet of light metal amounts to approximately 2 mm (column 4, line 42). The width of the connection seam 35 is indicated as being about 8 mm (column 4, line 52), and the thickness of the steel plate as 2 mm (column 4, line 35). This means that on the basis of the symmetrical arrangement of the connection seam 35, the width of edge 33 of the steel sheet 31 that is covered, on both sides, by the connection seam 35, amounts to 3 mm  $((8-2)+2)$ . The coverage width of the edge of the steel sheet 31 therefore corresponds to 1.5 times the thickness of the steel sheet 31, and this stands in contrast to claims 8 and 10, which require a coverage width  $b$  (see Fig. 2) of at least three times the thickness of the iron or titanium sheet 1. Accordingly, Bertels cannot anticipate claims 8 and 10.

Accordingly, since none of the secondary references disclose this width ratio, claims 2, 3, 5, 7 and 9 are also patentable over Bertels.

Regarding claim 10, it has already been explained that Bertels cannot anticipate claim 10 with regard to the coverage width of the sheet-metal cut-out 1 made of the iron or titanium material by the solder on the basis of aluminum. For this reason, looking at Bertels and Frings et al. together also cannot lead to the invention. Of course, it is not new to subject welded sheets to subsequent cold deformation that extends to the weld seam. However, it is surprising that the connection seam between an aluminum material and an iron material, according to the invention, allows subsequent cold deformation of the work piece without having to accept cracks in the region of the connection seam or impairments with regard to the deformation, resulting from the connection seam. Accordingly, Applicant submits that claim 10 is patentable over Bertels and Frings.

Claim 8 has also been rejected under 35 USC §103 as being unpatentable over Webb in view of Lorcher. Claim 2 is rejected as being unpatentable over Webb in view of Lorcher and further in view of Yajima. Claim 3 is rejected as being unpatentable over Webb in view of Lorcher and further in view of Lentz et al. Claim 5 is rejected as being unpatentable over Webb in view of Lorcher and further in view of Kunz. Claim 10 is rejected as

being unpatentable over Webb in view of Lorcher and Lentz et al.  
Claim 7 is rejected as being unpatentable over Webb in view of  
Lorcher and Lentz et al. and further in view of Frings.  
Applicant respectfully traverses.

The present invention relates to sheets of metal that are  
joined in the form of a butt joint, whereby the additional  
aluminum material, which forms the connection seam, is applied in  
a region that bridges the butt joint, specifically in such a  
manner that this additional material covers the edges of the  
sheet metal of iron or titanium material in a width corresponding  
to at least three times the thickness of this sheet metal.

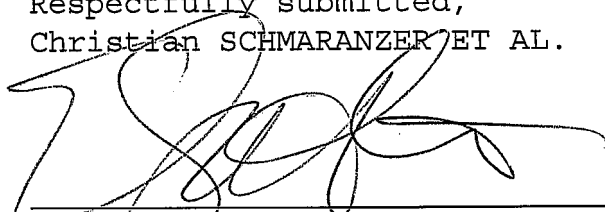
In contrast to this, Webb shows an iron material coated with  
titanium, and an aluminum alloy vapor-deposited onto the titanium  
layer. An aluminum hold solder is provided between the alloy and  
the aluminum material to be connected. The solder layer does not  
cover the edge of the iron material, so that Webb cannot make  
claim 8 obvious because Webb specifically does not show that the  
solder layer bridges the edge of the iron material on both sides.  
With regard to this characteristic, the Examiner refers to  
Lorcher et al. and asserts that it would be obvious for a person

skilled in the art to amend Webb so that the connection seam covers the edge of the iron or titanium material on both sides, to the prescribed minimum dimension, because it is known from Lorcher et al. to provide an overlap in accordance with four times the thickness of the steel sheet for an advantageous solder connection. However, the Examiner overlooks the fact that Lorcher et al. describes overlapping the steel sheet with the metal plate with which the steel sheet is to be connected, which stands in contrast with the invention, in which the two sheets to be connected are not supposed to overlap one another, but rather form a butt joint and coverage of the iron or titanium sheet, on both sides, takes place by means of the solder. Lorcher et al. therefore excludes connection seams for metal sheets forming a butt joint, so that a person skilled in the art cannot derive any suggestions for a possible improvement of the solder connection according to Webb from Lorcher et al., without having knowledge of the invention, particularly since Webb obviously does not provide a solder seam that covers the edge of the iron material on both sides. Therefore, even a combination of Webb and Lorcher et al. cannot lead to the invention according to claim 8. Since none of the other cited references disclose this feature, the dependent claims are patentable as well.

The same arguments apply to the rejection of claim 10, because coverage of the sheet-metal cut-out, on both sides, in a width that corresponds to at least three times the thickness of the sheet-metal cut-out, is required in claim 10, as well.

Accordingly, applicants submit that independent claims 8 and 10, as well as the dependent claims, are patentable over the cited references, taken either singly or in combination. Early allowance of the amended claims is respectfully requested.

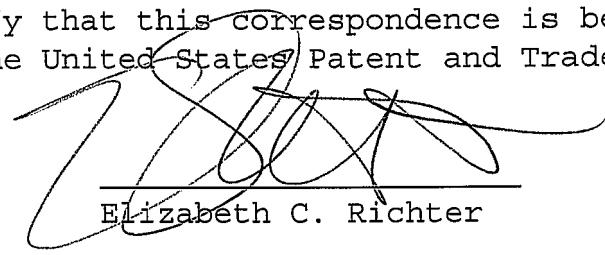
Respectfully submitted,  
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